South Texas Weather Journal

Summer 2004

Serving the Coastal Bend, Rio Grande Plains, and Victoria Crossroads

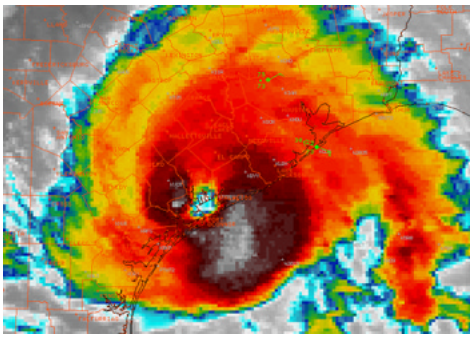
IN THIS ISSUE

VISIT OUR WEBSITE

www.srh.noaa.gov/crp

Volume 1, Issue 2

A New Season of Hurricanes

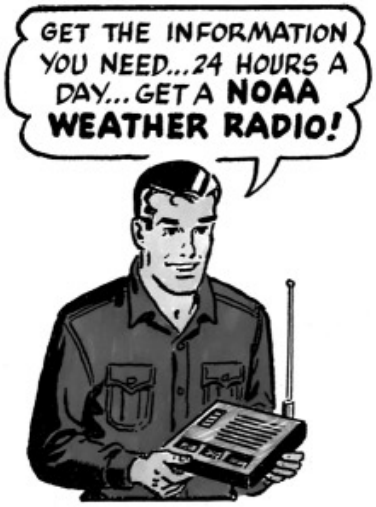


IR Satellite Imagery of Hurricane Claudette, July 15, 2003.

If you live within 150 miles of the Gulf of Mexico, you could be impacted by a hurricane and should begin making preparations now. The hurricane season begins June 1st and concludes November 30th. This year promises to be active with 12-15 named storms, 6-8 hurricanes and 2-4 major hurricanes (category 3 or greater). This forecast is about 40 percent above normal. However, it only takes one storm to make it a big season if that storm strikes you. Hurricane Andrew impacted Florida and Louisiana in 1992 during a very quiet season. There were only 3 storms that year; however one of them was Andrew. The science of predicting where a hurricane will go is improving, and last year was the best year on record for the National Hurricane Center. If you look back at hurricane track forecasts 10 years ago, the average error on a storm 3 days from landfall was 300 nautical miles. Last year this error shrank to 200 nautical miles, a substantial improvement. However, when it comes to forecasting the intensity of a hurricane at landfall, very little improvement has been made over the years. Thus it's a good rule of thumb to plan for a storm one category greater than forecast.

Local Emergency Manager Receives Mark Trail Award

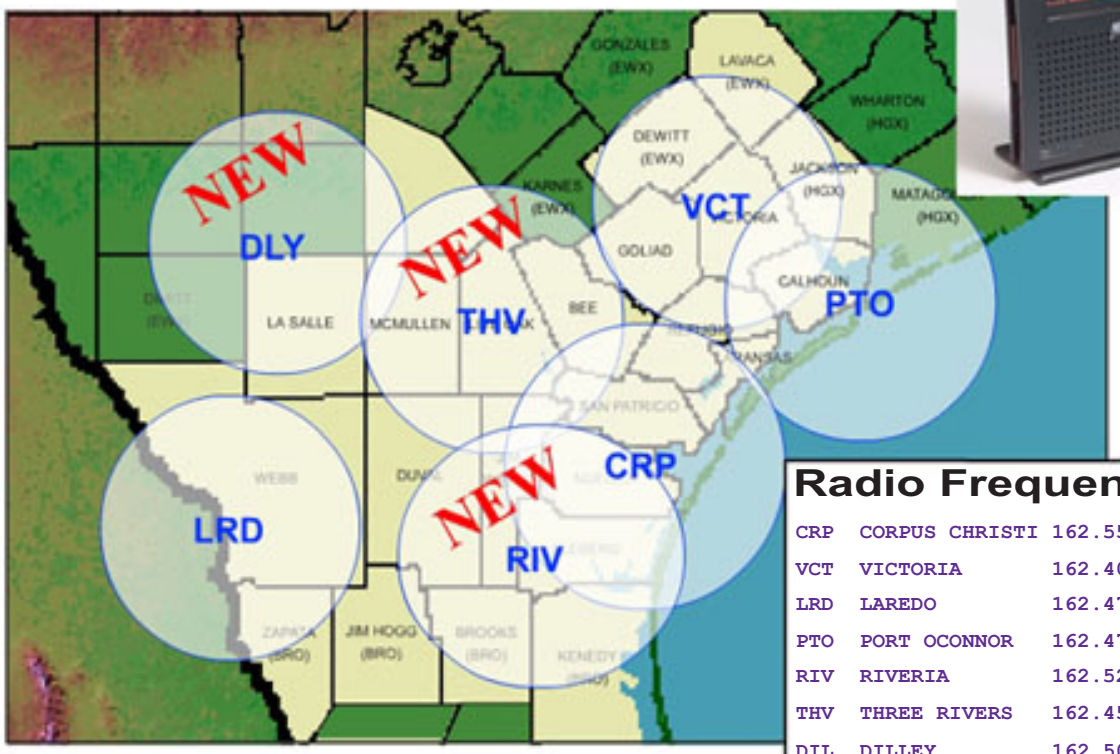
Tomas Sanchez Jr., Emergency Management Coordinator for the City of Kingsville and Kleberg County, will go to Washington D.C. to receive the Mark Trail Award in June. The award is named after syndicated comic strip character Mark Trail, the official spokesman for NOAA Weather Radio. In its 8th year, the Mark Trail Awards are presented to individuals or groups that made contributions to expand and improve the life-saving NOAA Weather Radio (NWR) system coverage, awareness, and radio receiver ownership across the nation. Mr. Sanchez developed a partnership with the Riviera Telephone Company, who donated space on their tower for the NWR system. The radio broadcast can be heard across 5 coastal bend counties including Kleberg, Nueces, Kenedy, Brooks, and Jim Wells on a frequency of 162.525 Mhz. Mr. Sanchez also purchased and distributed over 80 NWR receivers. NOAA Weather Radio continuously broadcasts weather forecasts and warnings, as well as other hazard warnings. It is credited with saving lives during severe weather conditions.



North American Syndicate Inc. World rights reserved

(See Coverage Map on Page 2)

NOAA Weather Radio



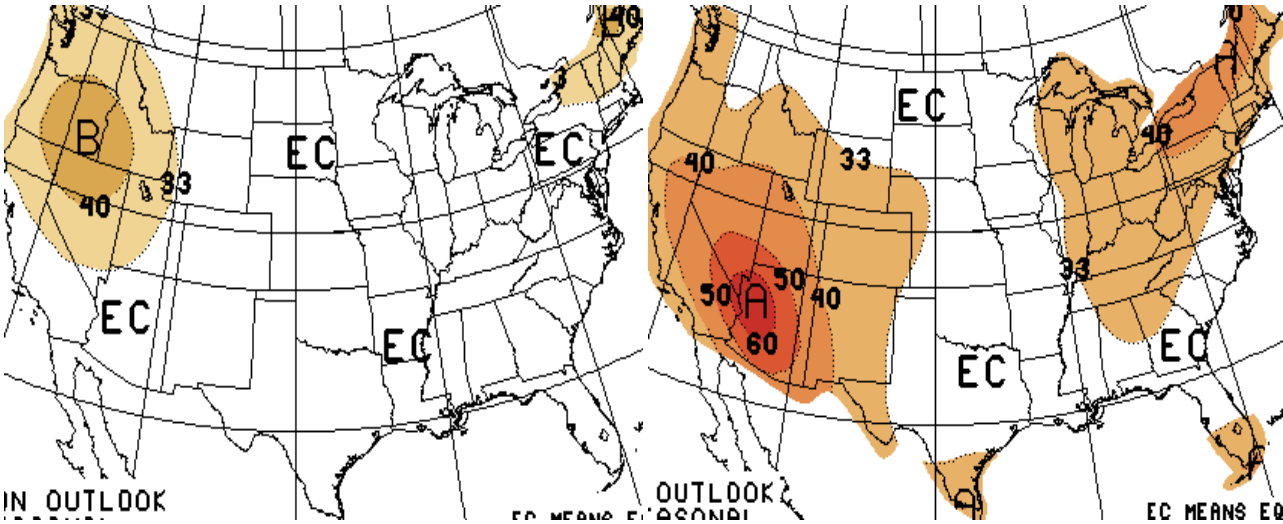
NOAA Weather Radio Coverage Area. Coverage will be expanding into the Hebbronville area during the coming year.

Radio Frequency

CRP	CORPUS CHRISTI	162.550 MHz
VCT	VICTORIA	162.400 MHz
LRD	LAREDO	162.475 MHz
PTO	PORT OCONNOR	162.475 MHz
RIV	RIVERIA	162.525 MHz
THV	THREE RIVERS	162.450 MHz
DIL	DILLEY	162.500 MHz

Warmer Summer in Store?

The National Weather Service's Climate Prediction Center produces long term forecasts of temperature and rainfall for the continental United States. These forecasts are updated on the 15th of every month and are available online. The outlook for South Texas for the July, August, and September period indicates temperatures will be above normal and precipitation will be near normal. Normal high temperatures in July range from the mid 90s in Victoria to 102 in Laredo, while in September, normal high temperatures drop to the upper 80s in Victoria and lower 90s in Laredo. Normal precipitation for the three-month time period ranges from 6.94 inches in Laredo to 10.95 inches in Victoria.



Left: *Precipitation Outlook for Jul-Sep. Orange is below normal precipitation.*
Right: *Temperature Outlook for Jul-Sep. Orange is above normal.*

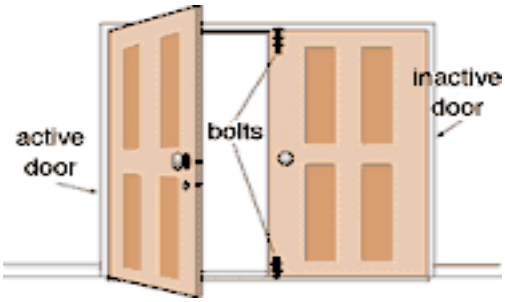
2004 ATLANTIC BASIN HURRICANE NAMES

Alex
Bonnie
Charlie
Danielle
Earl
Frances
Gaston
Hermine
Ivan
Jeanne
Karl
Lisa
Matthew
Nicole
Otto
Paula
Richard
Shary
Tomas
Virginie
Walter

Experience shows that the use of short, distinctive names in written as well as spoken communications is quick and easy to understand.

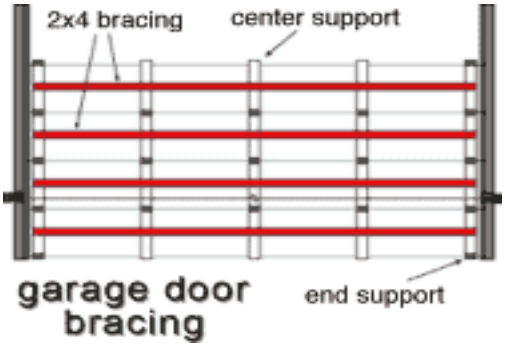
Preparing Your Property for a Hurricane

If you live in a low lying area near the coast or barrier island, there is little you can do to protect your home from the power of the storm surge. However if you live inland and away from the threat of storm surge, the following precautions may help minimize the damage associated from extreme wind or flying debris. Your objective should be to try to keep the wind from penetrating your home. Studies have shown that once the wind enters through a window or door, the roof is usually torn off and you may face a total loss of your home.



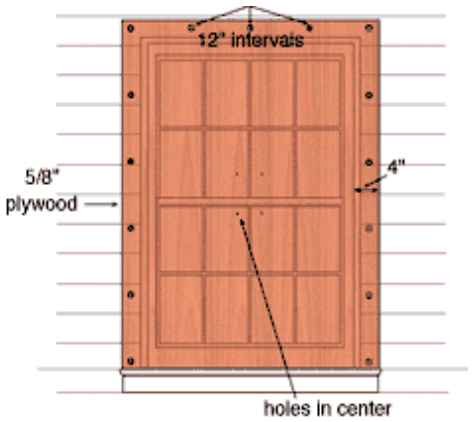
Double Door Bracing.

What should you do? Prepare storm shutters for every window in your home with at least 5/8" thickness of plywood or purchase professional storm shutters. Studies have shown that roofing shingles can penetrate ½" plywood in extreme wind, which is why a thicker material is needed. Brace double entry doors and garage doors. The garage door is often the weakest point in your home. Brace garage doors from behind or visit a local dealer for either a retrofit package or an entirely new storm resistant door. If you have a gable roof, you could apply 2x4 bracing to strengthen the internal roof structure. Newer homes are built much stronger in coastal counties thanks to stricter building codes. In newer homes, hurricane straps and bracing extend from the concrete foundation to the roof structure, and provide greater support from a hurricane's wind.



Garage Door Bracing.

Hurricane Claudette showed how extreme wind can affect trees. In a recent hurricane conference, the Texas Forest Service explained how tree selection and proper pruning through the life of the tree can result in stronger trees that can better endure the winds of a hurricane. See these links for more information. www.arborday.org <http://texasforestservice.tamu.edu>



Shutter Assembly.

INTERESTING WEATHER FACTS

Since 1829, there have been 39 hurricanes that have made landfall along the Mid Texas Coast.

By Month:

JUN:	8
JUL:	6
AUG:	9
SEP:	10
OCT:	5
NOV:	1

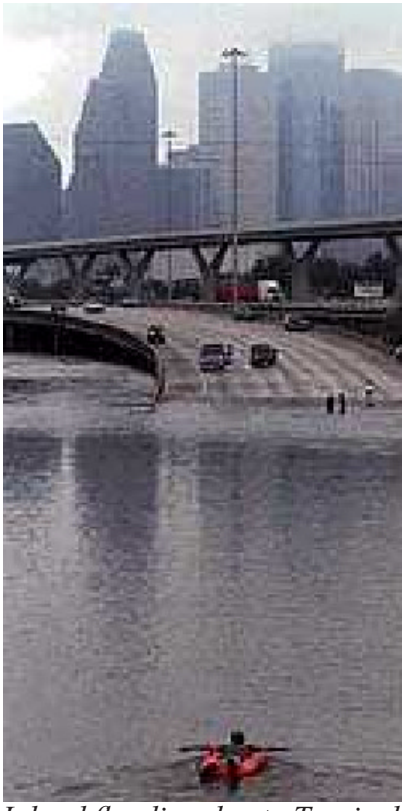
DID YOU KNOW?

The United States Lifesaving Association estimates that the annual number of deaths on our nation's beaches due to rip currents exceeds 100. Rip currents are powerful, channeled currents of water flowing away from shore. They typically extend from the shoreline, through the surf zone, and past the line of breaking waves. Rip currents can occur at any beach with breaking waves. Did you know that your local National Weather Service (NWS) in Corpus Christ has teamed up with NOAA Sea Grant, Texas A&M Corpus Christi, and the Corpus Christi Lifeguards to conduct a study of rip currents along the Texas coast? One goal of this study is to find a local correlation between wind conditions, rip curents and drownings. If enough of a correlation is determined, the NWS in Corpus Christi may begin issuing rip current forecasts. Stay Tuned!

Rip Current on Delaware Beach. To escape the "Grip of the Rip", swim parallel to the shore.

Lessons Learned From Past Hurricanes

Lessons can be learned when a tropical storm or hurricane makes landfall along the U.S. coastline. During Hurricane Claudette, we learned that a category one hurricane can pack a powerful punch and communities can be affected well inland away from the coast. Hurricane Hugo impacted the state of South Carolina in 1989 and produced 100 mph wind gusts in Charlotte, North Carolina, 150 miles inland from the coast. The stronger the storm, the more time it takes for surface friction (such as buildings and landscape) to reduce the winds.



Inland flooding due to Tropical Storm Allison in Houston 2001

After Claudette, many communities faced an entire week without electricity. Air conditioners were still, food spoiled in refrigerators, gas pumps and ATM machines didn't work. Although a week is a long time to live without power, especially during the heat of the summer, it's nothing compared to the several month time span that a major hurricane can cause. The community of Homestead, Florida was without power for up to two months after Hurricane Andrew struck in 1992.

Fatalities associated with hurricane storm surge have been on the decline since the mid 1900's, as evacuees head inland to escape harms way. This is made possible through the advent of satellites and improvements in weather forecasting that provide more advanced warning that a storm is coming. However, in the 21st century, more people perish due to inland flooding. Heavy rainfall associated with land falling tropical storms and hurricanes take more lives than storm surge and tornadoes combined. More specifically, people are dying because they drive their vehicles into flood waters and get washed away. The lesson learned is: people need to understand the dangers of inland flooding. Never drive your vehicle into flooded roadways. Turn Around, Don't Drown.

RETIRED HURRICANE NAMES

Agnes (1972)
Allen (1980)
Allison (2001)
Andrew (1992)
Audrey (1957)
Beulah (1967)
Camille (1969)
Carla (1961)
Celia (1970)
Diana (1990)
Elena (1985)
Fran (1996)
Gilbert (1988)
Gloria (1985)
Georges (1998)
Hazel (1954)
Hugo (1989)
Iris (2001)
Isidore (2002)
Keith (2000)
Lenny (1999)
Lili (2002)
Marilyn (1995)
Mitch (1998)
Opal (1995)
Roxanne (1995)

Hurricane Word Search

Atlantic
Beulah
Coast
Cyclone
Eye
Hurricane
Intensify
ITCZ
Knots
Landfall
Pressure
Shear
Squall
Storm surge
Tide
Tropics
Typhoon
Vortex
Waves

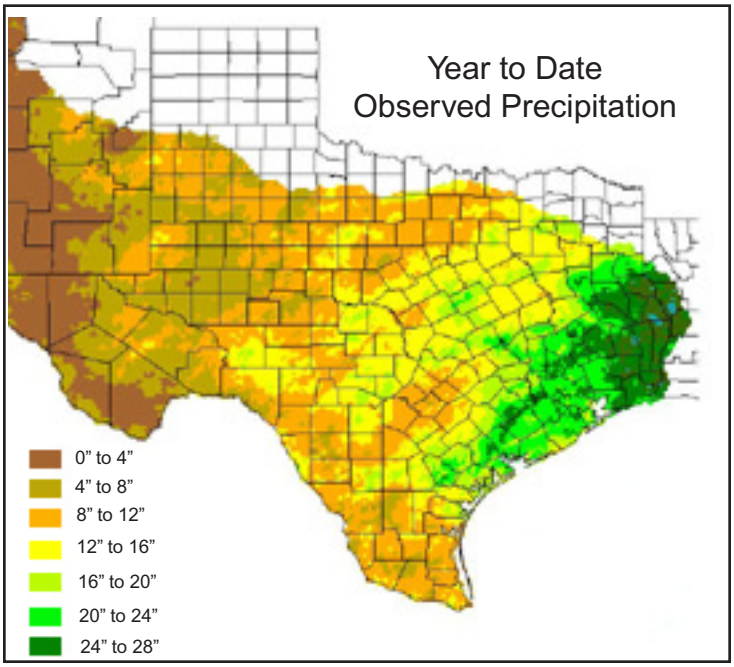
T	D	Y	F	I	S	N	E	T	N	I
R	D	B	E	U	L	A	H	G	K	Y
O	X	C	F	Q	D	T	O	W	S	R
S	E	Y	D	P	X	L	K	E	Y	E
I	T	C	S	E	V	A	W	H	N	B
C	R	L	R	J	T	N	R	A	H	E
N	O	O	H	P	Y	T	C	P	G	P
M	V	N	W	Z	B	I	J	R	L	L
T	D	E	F	S	R	C	U	E	L	L
U	R	K	N	R	T	S	I	S	A	A
T	R	O	U	Z	M	T	I	S	U	F
S	A	H	P	R	E	T	J	U	Q	D
A	E	Q	O	I	C	D	C	R	S	N
O	H	T	K	Z	C	M	I	E	P	A
C	S	K	N	O	T	S	Z	T	I	L

Students Return

On May 17th, our meteorology students, Eric Avila and Jennifer Salato, returned from Texas A&M in College Station. Upon arrival, Eric and Jennifer quickly passed their upper air certification test so they could launch weather balloons. This will be their primary duty during the summer; however they will also issue various climate and hydrology products, participate in Outreach activities, assist forecasters when necessary, and help with other office activities. Eric and Jennifer will be a big help in our busy office this summer, and we are glad to have them back!

Heavy Spring Rainfall in South Texas

Many areas near yearly averages



Precipitation amounts through the end of May. 12 to 20 inches was observed over most of the Coastal Bend and Victoria Crossroads while 8 to 16 inches was observed throughout most of the Rio Grande Plains.

Seemingly, the rains have been relentless this spring across South Texas. Total rainfall amounts for the first 6 months of the year are estimated near 10" along the Rio Grande river to 30" in Victoria. For many areas, this is 200-300 percent above normal and close to the totals received in an average year. Climatologically, the spring months of April and May are quite active as warm, humid air, is drawn inland from the Gulf of Mexico. This moisture laden air collides with cold dry air moving south from the Great Plains, resulting in episodes of showers and thunderstorms. However, our wettest period of the year typically occurs during the late summer and fall months of August, September and October when another 10-15 inches of rain may accumulate. These rains are usually associated with tropical systems.

How does it look for the remainder of the year? Based on the latest climate outlook, a normal rainfall pattern will extend into December. Therefore, yearly totals will likely be 5 to 10 inches above normal.

RAINFALL INFORMATION

Rainfall Amounts Jan - May 2004

Corpus Christi
19.79"

Normal
10.72"

Departure
+ 9.07"

Victoria
26.46"

Normal
14.82"

Departure
+ 11.64"

Laredo
11.07"

Normal
4.17"

Departure
+ 6.90"

NOTE: Laredo Totals are only through April.

The Corpus Christi Botanical Gardens has already received 30.42" of rainfall through May.

The month of March was the wettest on record for the city of Laredo.

Spotters Help During Busy Severe Weather Season

The National Weather Service (NWS) relies on local storm spotters to report vital information to the NWS during severe weather events. This spring, our weather spotters reaffirmed their value to the NWS. Ten significant severe weather and flooding events occurred across South Texas this past spring. February 24th, a squall line moved across the Rio Grande and Coastal Bend, removing the roof from a school in Robstown. April 2nd, heavy rains resulted in flash flooding. Early morning April 5th, an unusually strong low pressure system developed in the wake of a squall line. Wind gusts peaked at 55 mph at Bob Hall Pier and 64 mph in Victoria from this system. The next day, a long lived supercell thunderstorm moved from Bee

Story Continued on Page 6

Above: *April Flooding in Corpus Christi.*
Below: *Oso Creek near Corpus Christi in April.*

Spotters Help - Continued

to Calhoun county spawning tornadoes and dropping golf ball size hail. Spotters and TV crews from Victoria and Corpus Christi followed this storm and provided valuable storm reports to the radar operators at the NWS. April 25th, many residents in Corpus Christi were awakened to find their homes surrounded by water. Over 10 inches of rain fell in just 2 hours time. Strong thunderstorms with spectacular lightning displays affected the Coastal Bend May 1st. Thunderstorms produced 58 mph wind gusts in Cotulla May 8th. Funnel clouds and waterspouts were reported in Victoria and Calhoun Counties May 11th. However the most memorable and last event of the spring occurred May 13th as tornadoes, hail and flooding affected a large portion of south Texas. Tornadoes touched down across Bee, Goliad and San Patricio Counties. Thankfully no one was injured. However the hail stones were large enough to break car windshields in Woodsboro. Rainfall estimates totaled 8 to 12 inches from Skidmore to Victoria during this event.

When severe weather events occur, doppler radar, satellite imagery, and sophisticated computer systems are invaluable tools used by NWS meteorologists to issue warnings. Weather spotters bridge the gap between what is detected by radar and what actually occurs. We greatly value and appreciate all of the help and information provided to the NWS from our storm spotters.

Above: *Panoramic photo of a shelf cloud associated with a severe thunderstorm in Aransas County in February 2004. Photo courtesy of the Texas General Land Office.*

IN OUR NEXT ISSUE

The South Texas Weather Journal is produced by the staff at the Corpus Christi NWS Office and will be published on a quarterly basis during the spring, summer, fall and winter seasons.

CONTACT US:
(361) 289-0959
300 Pinson Drive
Corpus Christi, TX
78406

Science and Operations Officer Promoted

Andy Patrick, our Science and Operations Officer (SOO), was recently selected to fill the position of Meteorologist-in-Charge (MIC) at the National Weather Service (NWS) Weather Forecast Office (WFO) in Brownsville, Texas. He will assume the duties as MIC beginning May 30, 2004. Andy was the first SOO at the weather office in Corpus Christi, Texas. He held that position from August 1995 until May 2004. Join us in congratulating Andy for his well-deserved promotion to Meteorologist-in-Charge!

Cooperative Observers Receiving New Equipment

Cooperative Observers are receiving new temperature display units to replace the older models. The Nimbus PL unit has several features that are superior to the older MMTS-1 and MMTS-7 units currently in the field. Among the features, the Nimbus PL unit has the capability of storing daily maximum and minimum temperatures for 35 days. During power outages, a 9 volt battery provides enough energy to retain all data for up to five days. A lighted LCD display makes it easy to read the temperature values. The Nimbus PL unit can also interface with a computer to retrieve or display temperature information.